

IN THE CLAIMS

1-3. (Canceled).

4. (Currently Amended) The method according to claim + 9, wherein said mutation disrupts the interaction of the E4orf6 protein and the E1B-55kDa protein in said host cell.

5. (Canceled).

6. (Currently Amended) The method according to claim + 9, wherein said packaging cell is transiently transfected with said nucleic acid encoding said mutant adenovirus E4orf6 protein.

7. (Currently Amended) The method according to claim + 9, wherein said packaging cell is stably transfected with said nucleic acid encoding said mutant adenovirus E4orf6 protein.

8. (Currently Amended) The method according to claim + 9, wherein said nucleic acid encoding said mutant adenovirus E4orf6 gene is carried by a plasmids, bacteriophage, cosmid or retrovirus.

9. (Currently Amended) ~~The method according to claim 1,~~ A method of packaging a recombinant viral vector, comprising the steps of:

(a) providing a packaging cell, said packaging cell containing and expressing a nucleic acid encoding a mutant adenovirus E4orf6 protein, said E4orf6 protein containing at least one mutation in the region encoding amino acids 230 to 260 at position 240, 241, 243, 244, 248, or 251;

(b) transfecting or infecting said packaging cell with a nucleic acid that encodes a recombinant viral vector selected from the group consisting of adenovirus vectors and adeno-associated virus vectors, wherein said vector lacks a functional gene encoding E4orf6 protein;

and wherein said mutation renders said mutant adenovirus E4orf6 protein non-toxic to said transfected cells;

(c) culturing said transfected cells under conditions that permit expression of the mutant E4orf6 protein and the production of packaged recombinant viral vector therein; and
then

(d) collecting packaged recombinant viral vector from said cultured cells.

10. (Original) The method according to claim 9, in which said at least one substitution mutation is a substitution of arginine for an amino acid selected from the group consisting of glutamic acid, aspartic acid, serine, threonine, alanine and glutamine.

11. (Currently Amended) The method according to claim + 9, wherein said nucleic acid encoding said mutant adenovirus E4orf6 protein encodes (i) an arginine 241 to glutamic acid substitution mutation, (ii) an arginine 243 to glutamic acid substitution mutation, or (iii) both an arginine 241 to glutamic acid substitution mutation and an arginine 243 to glutamic acid substitution mutation.

12. (Currently Amended) The method according to claim + 9, wherein said nucleic acid encoding said mutant adenovirus E4orf6 protein encodes (i) an arginine 240 to glutamic acid substitution mutation, (ii) an arginine 251 to glutamic acid substitution mutation, or (iii) both an arginine 240 to glutamic acid substitution mutation and an arginine 251 to glutamic acid substitution mutation.

13. (Currently Amended) The method according to claim + 9, wherein said viral vector is an adenovirus vector.

14. (Currently Amended) The method according to claim + 9, wherein said viral vector is an adeno-associated virus vector.

15. (Canceled).

16. (Currently Amended) The packaging cell according to claim ~~45~~ 23, wherein said at least one mutation disrupts the interaction of the E4orf6 protein with the E1B-55kDa protein in a host cell.

17-20 (Canceled).

21. (Currently Amended) The packaging cell according to claim ~~45~~ 23, wherein said packaging cell is stably transfected with said nucleic acid encoding said mutant adenovirus E4orf6 protein.

22. (Currently Amended) The packaging cell according to claim ~~45~~ 23, wherein said nucleic acid encoding said mutant adenovirus E4orf6 protein is carried by a plasmid, bacteriophage, cosmid or retrovirus.

23. (Currently Amended) ~~The packaging cell according to claim 15,~~ A packaging cell, said packaging cell containing and expressing a nucleic acid encoding a mutant adenovirus E4orf6 protein, said E4orf protein containing at least one mutation in the region encoding amino acids 230 to 260 wherein said at least one mutation comprises a substitution mutation at position 240, 241, 243, 244, 248, or 251 that renders said protein non-toxic to a host cell in which said protein is expressed.

24. (Original) The packaging cell according to claim 23, in which said at least one substitution mutation is a substitution of arginine for an amino acid selected from the group consisting of glutamic acid, aspartic acid, serine, threonine, alanine and glutamine.

25. (Currently Amended) The packaging cell according to claim ~~45~~ 23, wherein said nucleic acid encoding said mutant adenovirus E4orf6 gene encodes (i) an arginine 241 to glutamic acid substitution mutation, (ii) an arginine 243 to glutamic acid substitution mutation, or (iii) both an arginine 241 to glutamic acid substitution mutation and an arginine 243 to glutamic acid substitution mutation.

26. (Currently Amended) The packaging cell according to claim ~~45~~ 23, wherein said nucleic acid encoding said mutant adenovirus E4orf6 gene encodes (i) an arginine 240 to glutamic acid substitution mutation, (ii) an arginine 251 to glutamic acid substitution mutation, or (iii) both an arginine 240 to glutamic acid substitution mutation and an arginine 251 to glutamic acid substitution mutation.

27. (Canceled).

28. (Currently Amended) The nucleic acid according to claim ~~27~~ 31, in which said at least one mutation disrupts the interaction of the E4orf6 protein with the E1B-55kDa protein in a host cell.

29. (Currently Amended) The nucleic acid according to claim ~~27~~ 31, wherein said nucleic acid is a DNA.

30. (Currently Amended) The nucleic acid according to claim ~~27~~ 31, wherein said nucleic acid is a plasmid, bacteriophage, plasmid or retrovirus.

31. (Currently Amended) ~~The nucleic acid according to claim 27, A nucleic acid encoding a mutant adenovirus E4orf6 protein, said E4orf6 protein containing at least one mutation in the region encoding amino acids 230 to 260~~ wherein said at least one mutation comprises a substitution mutation at position 240, 241, 243, 244, 248, or 251 that renders said protein non-toxic to a host cell in which said protein is expressed.

32. (Original) The nucleic acid according to claim 31, in which said at least one substitution mutation is a substitution of arginine for an amino acid selected from the group consisting of glutamic acid, aspartic acid, serine, threonine, alanine and glutamine.

33. (Original) The nucleic acid according to claim 31, wherein said nucleic acid encodes (i) an arginine 241 to glutamic acid substitution mutation, (ii) an arginine 243 to glutamic acid substitution mutation, or (iii) both an arginine 241 to glutamic acid substitution mutation and an arginine 243 to glutamic acid substitution mutation.

34. (Original) The nucleic acid according to claim 31, wherein said nucleic encodes (i) an arginine 240 to glutamic acid substitution mutation, (ii) an arginine 251 to glutamic acid substitution mutation, or (iii) both an arginine 240 to glutamic acid substitution mutation and an arginine 251 to glutamic acid substitution mutation.

35-41. (Canceled)